

RADIO FREQUENCY RADIATION EXPOSURE REPORT

Mobiles /Fixed Base Station Maximum Permissible Exposure (MPE)

OF

Product Name: IEEE802.11b/g AP
Brand Name: 4ipnet, Cipherium, USC, Cerio, Pheenet, PCI, Cenwell, LanReady, Wavcore, Deliberant, Ambeon
Model Name: EAP700, EAP701, A700, A701, WM-100GX, WAP-954GP, CQW-WALLAP, CAP-981X, CAP-981WX, CAP-971X, CAP-971WX, AP981X, AP981WX, AP971X, AP971WX, WV-100WA, WV-100CA, DLB AP-2W, WL54A-WAP
Model Different: Different models and Brands for different markets.
FCC ID: SCD020056
Report No.: ER/2009/50035-02
Issue Date: Oct. 05, 2009
Prepared for: LanReady Technologies Inc.
3F, No. 116, Sinhu 2nd Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)
Prepared by: SGS Taiwan Ltd.
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VERIFICATION OF COMPLIANCE

Applicant: LanReady Technologies Inc.
3F, No. 116, Sinhu 2nd Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)

Product Name: IEEE802.11b/g AP

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Model Difference: Different models and Brands for different markets.

File Number: ER/2009/50035-02




Date of test: May. 27, 2009 ~ Sep. 17, 2009

Date of EUT Received: May. 27, 2009

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd., Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in FCC OET Bulletin 65 Supplement C and 47 CFR §2.1091 and RSS102.

The test results of this report relate only to the tested sample identified in this report.

Test By:		Date	Oct. 05, 2009
	_____ Bondi Liu / Engineer		
Prepared By:		Date	Oct. 05, 2009
	_____ Alex Hsieh / Sr. Engineer		
Approved By:		Date	Oct. 05, 2009
	_____ Vincent Su/Manager		

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Report Version

Version No.	Date	Description
00	Oct. 05, 2009	Initial creation of document

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1. GENERAL INFORMATION

General:

Product Name	IEEE802.11b/g AP	
Brand Name	4ipnet, Cipherium, USC, Cerio, Pheenet, PCI, Cenwell, LanReady, Wavecore, Deliberant, Ambeon	
Model Name	EAP700, EAP701, A700, A701, WM-100GX, WAP-954GP, CQW-WALLAP, CAP-981X, CAP-981WX, CAP-971X, CAP-971WX, AP981X, AP981WX, AP971X, AP971WX, WV-100WA, WV-100CA, DLB AP-2W, WL54A-WAP	
Model Difference	Different models and Brands for different markets.	
Power Supply	12V or 48V dc by AC/DC power adapter	
	Adapter:	1. Model No.: A5-20S48-V 2. Model No.: SW1201500-W01

WLAN:

Frequency Range:	2412 – 2462 MHz
Channel number:	11 channels
Max. Output Power:	802.11 b: 27.25 dBm (Peak) 802.11 g: 24.36 dBm (Peak)
Modulation Technology:	DSSS, OFDM
Modulation type:	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Transition Rate:	802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps
Antenna Designation:	Chip antenna 3dBi Gain
Type of Emission	16M41M4D

The EUT is compliance with IEEE 802.11 b/g Standard.

This test report applies for 802.11b/g WLAN.

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Brand Name / Model Number lists:

Brand Name	Model Number
4ipnet	EAP700
4ipnet	EAP701
Cipherium	A700
Cipherium	A701
USC	A700
USC	A701
Cerio	WM-100GX
Pheenet	WAP-954GP
PCI	CQW-WALLAP
Cenwell	CAP-981X
Cenwell	CAP-981WX
Cenwell	CAP-971X
Cenwell	CAP-971WX
LanReady	AP981X
LanReady	AP981WX
LanReady	AP971X
LanReady	AP971WX
Wavecore	WV-100WA
Wavecore	WV-100CA
Deliberant	DLB AP-2W
Ambeon	WL54A-WAP

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1.1 Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1093 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equipment power density

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1.2 Maximum Permissible Exposure (MPE) Evaluation

MPE Prediction (802.11b/g)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

2412MHz

Maximum peak output power at antenna input terminal:	27.25	(dBm)
Maximum peak output power at antenna input terminal:	530.8844442	(mW)
Duty cycle:	100	(%)
Maximum Pav :	530.8844442	(mW)
Antenna gain (typical):	3	(dBi)
Maximum antenna gain:	1.995262315	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2412	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm ²)
Power density at predication frequency at 20 (cm)	0.2108387	(mW/cm ²)

Measurement Result

The predicted power density level at 20 cm is 0.2108387 mW/cm². This is below the uncontrolled exposure limit of 1 mW/cm² at 2412MHz.